

on August 1st. The party consisted of Professor C. L. Bristol, Messrs. F. W. Carpenter, C. E. Brush, Jr., F. Erdwurm, of the graduating class; Messrs. Hill, Magnus and Wooley of the present Junior class, and Mr. A. Benton Müller.

The reconnaissance work of the two former years was continued from White's Island in Hamilton Harbor as headquarters. The buildings on the islands afforded far better facilities for laboratory work than was obtained on the other trips, and also brought the party nearer to the south shore and the Great Sound. An important feature was a series of pools constructed above tide level and supplied with plenty of running sea-water, in which a day's 'catch' could be examined alive at leisure. A naphtha launch and a small yacht gave the necessary facilities for collecting. The principal work was reconnaissance and many new forms were found among the *Crustacea*, *Echinoderms*, *Coelenterates*, *Tunicates*, *Mollusca*. Perhaps the most important single trip was that made to North Rock, an isolated fragment of the old atoll-shaped reef, about nine miles out at sea. At dead low tide a small area is laid bare but almost awash, and attainable only in the smoothest of water. Here the life of the ocean swarms and offers rare opportunities for study. As in the former years a large number of the showy fishes that abound in the coral reefs were brought home alive for the New York Aquarium. Notwithstanding the sudden fall of temperature at the northern edge of the Gulf Stream the system of regulation of the temperature is now so perfect that less than one per cent. die on the voyage. A pair of green parrot fishes of large size, and a large green muray about eight feet long were the most conspicuous among them, and are living and in good health at this date.

FRANCIS E. LLOYD,
Secretary.

TORREY BOTANICAL CLUB, OCT. 25, 1899.

THE scientific program opened with a paper by Dr. D. T. MacDougal on 'The Mycorrhiza of *Cephalanthera*,' describing the general characters of this Pacific coast plant, with special reference to its symbiotism, and with exhibition of specimens in alcohol. Dr. MacDougal's specimens form probably the most complete examples

of its root system ever procured, the plant growing among matted hemlock roots and very difficult to get at. Discussion by Dr. Britton of the taxonomic relations of *Cephalanthera* followed.

The second subject of the evening was that of Ferns, 'Notes on Ferns' were presented by Mrs. Britton, with specimens and lantern views. Dr. Underwood exhibited some very large examples of *Botrychium lanceolatum* from the foot of Mt. Rainier, reaching about 1 foot high, including roots, and with frond nearly 3 inches in length.

Mr. W. N. Clute spoke of finding *Dryopteris Goldieana* at Bedford Park, and of continued discoveries of *Dryopteris simulata*, usually in company with *Woodwardia areolata*.

Mrs. Britton spoke of the association of *Dryopteris simulata* on the Pocono with *Rhododendron maximum*, in very different surroundings; and called attention to its distinctly blue-green coloring.

Mr. Clute reported finding last July a new station for *Schizæa pusilla* at Allen's Bridge, N. J., on the east branch of the Wading river, in quantity, observed last July. The fertile fronds of the last year were then still remaining on the plant. Sterile fronds were coiling about neighboring stems as if with a trace of the climbing habit of its relative, *Lygodium*. This coiling tendency, added Dr. Britton, has occasioned the name Curly-grass, which was found in use in New Jersey for the *Schizæa*.

The Secretary referred to the successful transplanting of *Schizæa* into a locality near Lake-wood, N. J., by Miss R. W. Farrington.

Miscellaneous notes constituted the remainder of the program. The Secretary made some remarks upon singularities in the distribution of *Aster Schreberi*, a species described by Nees in 1818, from a single plant, and afterward omitted by botanists, until the publication of the Illustrated Flora. The abundance of this species, which he finds characteristic of the Schoharie drainage-basin of the Catskills, contrasts strangely with its absence from other parts of that region.

Judge Brown reported finding *Solidago odora* on high ground near Sam's Point, late in the season, many scattered plants blooming at about 2,000° altitude.

Dr. Britton remarked that this forms an interesting addition to the number of coast plants found in the Shawangunk range. It has been claimed that the breaking up of sandstone rocks there has produced a sandy soil sufficiently similar to that of the seashore to permit the growth of certain arenophilous plants usually found only on the coast.

Dr. T. F. Allen spoke of a specimen of *Rhus vernicifera*, the lacquer tree of Japan, which is growing luxuriantly on his farm in Connecticut. It resembles our swamp sumach, *Rhus venenata*, in appearance, and is becoming a handsome tree. Some of his family who are sensitive to Rhus poisoning find it necessary to avoid going near it.

Dr. Britton also reported a gift to the Botanic Garden of about 200 volumes which had belonged to the botanist, David Hosack. They are in excellent condition, and some of them extremely rare. EDWARD S. BURGESS,

Secretary.

BIOLOGICAL SOCIETY OF WASHINGTON, 312TH MEETING, SATURDAY, NOVEMBER 19TH.

MR. F. A. LUCAS read a 'Letter from H. H. Field Concerning the Concilium Bibliographicum, and the Proposed Catalogue of the Royal Society,' calling attention to the expense of the proposed publication, even though no card catalogue was issued, and stating that the Concilium could carry out the entire scheme at a less cost than the incomplete publication proposed by the Royal Society.

Mr. Frederick V. Coville read a paper on 'The Botanical Explorations of Thomas Nuttall in California,' showing that the dates on which Nuttall is stated to have visited various localities were erroneously given.

Professor Barton W. Evermann described 'A Physical and Biological Survey of Lake Maxinkuckee,' giving the various problems whose solution was desired, and the methods employed for soundings, obtaining the temperature, and studying the plankton of the lake.

O. F. COOK, Secretary.

SCIENCE CLUB OF THE UNIVERSITY OF WISCONSIN.

THE November meeting of the Science Club of the University of Wisconsin was held on the 21st

instant, the Vice president, Mr. Edward Kremers, in the chair. The programme of the evening was a paper by Mr. Louis Kahlenberg on 'The Present Status of our Knowledge of Solutions.'

After an exposition of the modern theories of solution and of electrolytic dissociation, the speaker pointed out that his recent researches on non-aqueous solutions have shown that there are solutions that conduct electricity in which, according to molecular weight determinations there is no dissociation, and that furthermore, the molecular conductivity in some solutions does not change with the dilution, and that in others it decreases as the volume increases. These facts can not be harmonized with the theory of electrolytic dissociation.

In the criticism of the general theory of solutions it was emphasized that the solvent does not act merely as so much space, but that it has a far more important function, the very act of solution itself depending on a mutual interaction of solvent and solute.

The paper was discussed by Messrs. B. W. Snow, H. L. Russell, E. Kremers and C. F. Burgess. WM. H. HOBBS.

DISCUSSION AND CORRESPONDENCE.

AN ALIEN CLEMATIS IN NEW MEXICO

LAST July I found an interesting and peculiar *Clematis* growing along the road-side in the town of Las Vegas, N. M., apparently wild. It was clearly related to the *Clematis* (*Atragene*) *occidentalis* (Hornem.) of the adjacent mountains, but still quite distinct. It did not come into full flower until the *C. occidentalis* was over, and the flowers were yellow instead of blue or white. Careful comparisons showed that the plant was different from anything known in America, so I drew up a description, under the name of *C. crux-flava*, 'the yellow cross.' During the rest of the summer I examined a good deal of the country near Las Vegas, and nowhere was the new *Clematis* to be seen, except within the limits of the town. A very vigorous plant was found growing in a garden, but nobody knew how it got there. These facts suggested an alien, so I sent specimens to Dr. B. L. Robinson at Cambridge, and to Kew Gardens, requesting that they might be compared with the Asiatic species. From both places in due time came the reply